

Section 08210

FLUSH WOOD DOORS

PART 1 – G E N E R A L

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract apply to the work of this Section.
- B. Section 8120 Interior Aluminum Door Frames and Windows.

1.02 SUBMITTALS

- A. In accordance with the requirements, submit a complete listing of all manufacturers, products, model numbers, and designs proposed for use in the Work of this Section.
- B. Maintain one copy all shop drawings, product data, and samples, manufacturer's specifications, recommendations, installation instructions, and maintenance data at the Project Site. At Project Closeout, turn over copy to the Engineer who will transmit to the Owner.
- C. Submit only the items listed below to the Engineer for review in accordance with Conditions of the Contract and Division One sections.
- D. Shop Drawings: Submit shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for factory finishing and other pertinent data.
  - 1. Coordinate submittals with other doors, frames, and hardware and use the same "opening number identification" as given on the Drawings and the Door Schedule.
    - a. Submittals not using the numbering identification system shown on Engineer's Drawings and Schedules will be rejected.
  - 2. For factory pre-machined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light and louver openings.
- E. Samples: Submit samples, 1'-0" square or as indicated, for the following:
  - 1. Plastic Laminate Faced Doors: Each color, finish and pattern required.

1.03 QUALITY ASSURANCE

- A. Quality Standards: Comply with the following standards:

1. NWWDA Quality Standard: I.S.1 "Industry Standard for Wood Flush Doors", of National Wood Window and Door Association (NWWDA).
2. AWI Quality Standard: "Architectural Woodwork Quality Standards"; including Section 1300 "Architectural Flush Doors", of Architectural Woodwork Institute (AWI) for grade of door, core construction, finish and other requirements exceeding those of NWWDA quality standard.

B. Manufacturer: Obtain doors from a single manufacturer.

#### 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Protect doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with requirements of referenced standards and recommendations of NWWDA pamphlet "How to Store, Handle, Finish, Install, and Maintain Wood Doors", as well as with manufacturer's instructions.
- B. Identify each door with individual opening numbers which correlate with designation system used on shop drawings for door, frames, and hardware, using temporary, removable or concealed markings.

#### 1.05 PROJECT CONDITIONS

- A. Conditioning: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during remainder of construction period to comply with the following requirements applicable to project's geographical location:
  1. Referenced AWI quality standard including Section 100-S-3 "Moisture Content".

#### 1.06 WARRANTY

- A. General: Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.
- B. Door Manufacturer's Warranty: Submit written agreement in door manufacturer's standard form signed by Manufacturer, Installer and Contractor, agreeing to repair or replace defective doors that have warped (bow, cup or twist) or that show telegraphing of core construction in face veneers, or do not conform to tolerance limitations of referenced quality standards.
  1. Warranty shall also include reinstallation which may be required due to repair or replacement of defective doors where defect was not apparent prior to hanging.
  2. Warranty shall be in effect during following period of time after date of Substantial Completion.
  3. Solid Core Interior Doors:

- a. Life of installation.
- 4. Solid Core Interior Doors with Plastic Laminate Faces:
  - a. Life of installation.
- C. Contractor's Responsibilities: Replace or refinish doors where Contractor's work contributed to rejection or to voiding of manufacturer's warranty.

## PART 2 - PRODUCTS

### 2.01 FLUSH SOLID CORE WOOD DOORS, PLASTIC LAMINATE FACED

- A. Bond: Type II water-resistant.
- B. Core: 5-ply bonded low density wood blocks, random lengths, kiln dried.
- C. Face Panels: NEMA LD-3, GP-50 (0.050" nominal thickness), matte finish solid color(s) as scheduled on Drawings or, if not scheduled, as selected by Engineer from Wilson Art, Nevamar, or Formica brand plastic laminates.
- D. Door Edges: 2-ply closed grain solid hardwood; paint to match plastic laminate faces.
- E. Subject to compliance with requirements, provide manufacturer and product from one of the following:
  - 1. Eggers Industries "Master Flush-Stave".
  - 2. Weyerhaeuser Company, Marshfield Wisconsin Div., "DFS".
  - 3. Algoma Hardwoods, Inc. "Stave Lumber Core".
  - 4. Fenestra Corp. "GSHPL".

### 2.02 FIRE RATED (20 MINUTE) FLUSH WOOD DOORS, PLASTIC LAMINATE FACED

- A. Bond: Type II water-resistant.
- B. Core: 5-ply bonded low density wood blocks, random lengths, kiln dried.
- C. Face Panels: NEMA LD-3, GP-50 (0.050" nominal thickness), matte finish solid color(s) as scheduled on Drawings or, if not scheduled, as selected by Architect from Wilson Art, Nevamar, or Formica brand plastic laminates.
- D. Door Edges: Fire retardant treated Birch or Maple; paint to match plastic laminate.
- E. Subject to compliance with requirements, provide manufacturer and product from one of the following:

1. Eggers Industries "Master Flush-Stave, 20 Minute".
2. Weyerhaeuser Company, Marshfield Wisconsin Div., "DFS-20".
3. Algoma Hardwoods, Inc. "Stave Lumber Core, 20 Minute".
4. Fenestra Corp. "GSHPL, 20 Minute".

#### 2.03 FIRE RATED FLUSH WOOD DOOR, PLASTIC LAMINATE FACED

- A. Bond: Type II water-resistant.
- B. Core Construction: Incombustible mineral. Provide UL approved 5" deep solid wood top rail and lock block reinforcement.
- C. Face Panels: NEMA LD-3, GP-50 (0.050" nominal thickness), matte finish solid color(s) as scheduled on Drawings or, if not scheduled, as selected by Engineer from Wilson Art, Nevamar, or Formica brand plastic laminates.
- D. Door Edges: Fire retardant treated Birch or Maple; paint to match plastic laminate faces.
- E. Subject to compliance with requirements, provide manufacturer and product from one of the following:
  1. Eggers Industries "Fire Doors - Flush".
  2. Weyerhaeuser Company, Marshfield Wisconsin Div., "Mineral Core DFM Series".
  3. Algoma Hardwoods, Inc. "Custom Royal Wood Fire Doors".
  4. Fenestra Corp. "HPL Fire Doors" Series.

#### 2.04 LOUVERS AND LIGHT FRAMES

- A. Metal Louvers: Size, type and profile shown and fabricated from the following:
  1. Steel: 20-gage, galvanized and factory primed for paint finish.
- B. Metal Frames for Light Openings in Fire Doors and non-rated doors: Manufacturer's standard frame formed of 18-gage cold-rolled steel, factory-primed, and approved for use in door of fire-rating indicated.

#### 2.05 FABRICATION

- A. Fabricate flush wood doors to produce doors complying with following requirements:
  1. In sizes indicated for job-site fitting.
  2. Factory-prefit and premachine doors to fit frame opening sizes indicated with the following uniform clearances and bevels:

- a. Comply with tolerance requirements of AWI for prefitting. Comply with final hardware schedules and door frame shop drawings and with hardware templates.
  - b. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with factory pre-machining.
- B. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of doors required.
  1. Light Openings: Trim openings with moldings of material and profile indicated.
  2. Louvers: Factory install louvers in prepared openings.
- C. Fire-Rated Wood Doors: Provide wood doors that are identical in materials and construction to units tested in door and frame assemblies per ASTM E 152 and which are labeled and listed for ratings indicated by UL, Warnock Hersey or other testing and inspection agency acceptable to authorities having jurisdiction.
  1. Provide UL approved 5" deep solid wood top rail reinforcement suitable to hold surface mounted closers with 1-1/2" x No. 12 fully threaded wood screws without the use of through-bolted fasteners.
  2. At hinge stile, provide additional UL approved hardwood or high-density material to provide a minimum 5000 lb. screw withdrawal resistance and minimum 300,000 slam cycles without failure of mortise hinges.
  3. At lock stile, provide additional UL approved "Lock Block" hardwood blocking to provide solid anchorage for installation of locksets.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine installed door frames prior to hanging door:
  1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
  2. Reject doors with defects.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Manufacturer's Instructions: Install wood doors to comply with manufacturer's instructions and of referenced AWI standard and as indicated.
  1. Install fire-rated doors in corresponding fire-rated frames in accordance with requirements of NFPA No. 80.

- B. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.
  - 1. Fitting Clearances for Non-Rated Doors: Provide 1/8" at jambs and heads; 1/16" per leaf at meeting stiles for pairs of doors; and 1/8" from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4" clearance from bottom of door to top of threshold.
  - 2. Fitting Clearances for Fire-Rated Doors: Complying with NFPA 80.
  - 3. Bevel non-rated doors 1/8" in 2" at lock and hinge edges.
  - 4. Bevel fire-rated doors 1/8" in 2" at lock edge; trim stiles and rails only to extent permitted by labeling agency.
- C. Pre-fit Doors: Fit to frames for uniform clearance at each edge.

### 3.03 ADJUSTING AND PROTECTION

- A. Operation: Re-hang or replace doors, which do not swing or operate freely.
- B. Finished Doors: Refinish or replace doors damaged during installation.
- C. Protect doors as recommended by door manufacturer to ensure that wood doors will be without damage or deterioration at time of Substantial Completion.

END OF SECTION